ISOCARD 2015

ISOCARD ҚОҒАМЫНЫҢ
«ЖІБЕК ЖОЛЫ ТҮЙЕЛЕРІ: ТҰРАҚТЫ ДАМУДА КАМЕЛИДТЕРДІ ЗЕРТТЕУ»
4ШІ КОНФЕРЕНЦИЯСЫ

ALMATY

4TH CONFERENCE OF ISOCARD
"SILK ROAD CAMEL: THE CAMELIDS, MAIN STAKES FOR SUSTAINABLE DEVELOPMENT"

4АЯ КОНФЕРЕНЦИЯ ISOCARD
«ВЕРБЛЮДЫ ШЕЛКОВОГО ПУТИ: ИССЛЕДОВАНИЯ КАМЕЛИДОВ ДЛЯ УСТОЙЧИВОГО РАЗВИТИЯ»

8-12 МАУСЫМ JUNE ИЮНЯ

ДЕМЕУШІЛЕР / SPONSORS

ҰЙЫМДАСТЫРУШЫЛАР / ORGANIZATORS

ISSN 1999-3951

ВЕТЕРИНАРИЯ

ҒЫЛЫМИ-ТӘЖІРИБЕ ЖУРНАЛЫ / НАУЧНО-ПРАКТИЧЕСКИЙ ЖУРНАЛ / SCIENTIFIC AND PRACTICAL JOURNAL

ISOCARD ҚОҒАМЫНЫҢ
«ЖІБЕК ЖОЛЫ ТҮЙЕЛЕРІ: ТҰРАҚТЫ ДАМУДА КАМЕЛИДТЕРДІ ЗЕРТТЕУ»
4ШІ КОНФЕРЕНЦИЯСЫ

4TH CONFERENCE OF ISOCARD
“SILK ROAD CAMEL: THE CAMELIDS, MAIN STAKES FOR SUSTANAIBLE DEVELOPMENT”

4АЯ КОНФЕРЕНЦИЯ ISOCARD
«ВЕРБЛЮДЫ ШЕЛКОВОГО ПУТИ: ИССЛЕДОВАНИЯ КАМЕЛИДОВ ДЛЯ УСТОЙЧИВОГО РАЗВИТИЯ»

ISSN 1999-3951

ISOCARD ҚОҒАМЫНЫҢ
“Жібек жолы түйелері: тұрақты дамуда камелидтерді зерттеу”
4-ші конференциясының
МАТЕРИАЛДАРЫ
Қазақстан, Алматы қаласы, 8-12 маусым, 2015 жыл

PROCEEDINGS
of 4th Conference of ISOCARD
“Silk Road Camel: The Camelids, Main Stakes For Sustainable Development”
June 8-12, 2015 Almaty, Kazakhstan

МАТЕРИАЛЫ
4-ой конференции ISOCARD
“Верблюды шелкового пути: исследования камелидов для устойчивого развития ”
8-12 июня, 2015 Алматы, Казахстан

Special issue of Scientific and Practical Journal Veterinariya #2 (42) 2015
«Ғылыми және практикалық Ветеринария» журналының арнайы нөмірі №2 (42) 2015
Специальный номер научно-практического журнала «Ветеринария» №2 (42) 2015

Almaty, 2015

Proceedings of 4th conference of ISOCARD «Silk Road Camel: Main Stake For Sustainable Development". June 8-12, 2015 Almaty, Kazakhstan. – Материалы 4-ой конференции ISOCARD «Верблюды шелкового пути: исследования камелидов для устойчивого развития». 8-12 июня 2015 года; город Алматы / Editor in chief G. Konuspayeva. – Алматы: Қазақ университеті, 2015. – 488 с.
ISSN 1999-3951

ISSN 1999-3951
Citation of the Proceedings as « Special Issue of Scientific and Practical Journal Veterinariya #2 (42) 2015 »

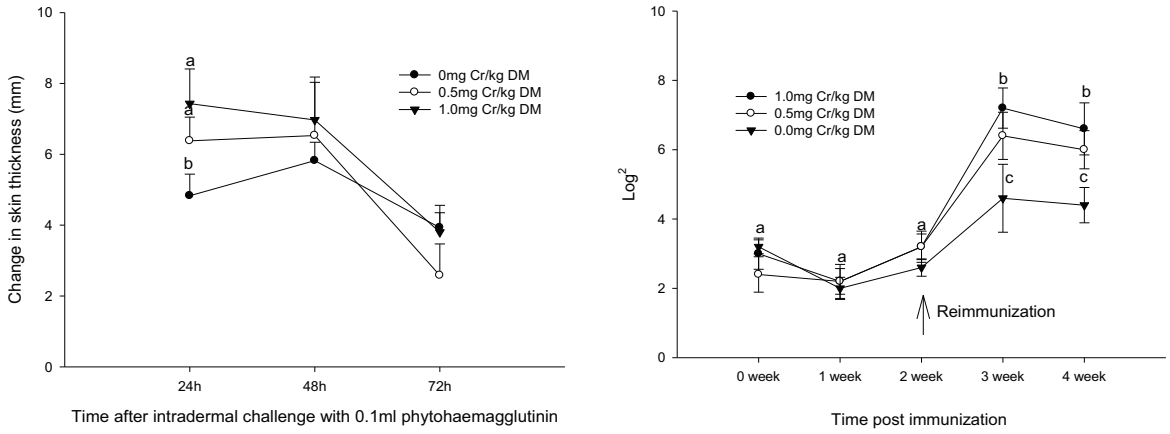

Figure 1 Effect of dietary Cr supplementation on cellular and humoral immunity of camel calves reared under dry hot summer conditions.

The reduction in antibody production under heat stress could be due to the increase in inflammatory cytokines, with the subsequent stimulation of hypothalamic production of corticotrophin releasing hormone (Ogle *et al*., 1997), and subsequent cortisol production which is known to inhibit antibody production (Gross, 1992). It is well documented that heterophils are particularly sensitive to adrenocorticotropic hormone (Geraert *et al*., 1996). Thus, the reduction of N: L ratio of Cr supplemented camel calves observed in this study could be related to the Cr-induced reduction in blood cortisol. Therefore, the observed reduction in blood cortisol level could indicate that it works as a principal mechanism by which chromium alleviates the heat-stress induced depression of both cellular and humoral immune response in camel calves. We do recommend supplementation of organic Cr to the diet of camel calves exposed to hot-arid environment in order to enhance their immune response.

References

1. Al-Ruwaili, M.A., Khalil, O.M. and Selim, S.A., 2012. Viral and bacterial infections associated with camel (*Camelus dromedarius*) calf diarrhea in North Province, Saudi Arabia. Saudi J. Biol. Sci., 19, 35-41.
2. Al-Mufarrej, S.I., Al-Haidary, I.A., Al-Kraidees,M.S., Hussein, M.F. and Metwally, H.M., 2008. Effect of Chromium Dietary Supplementation on the Immune Response and Some Blood Biochemical Parameters of Transport-stressed Lambs. Asian Australasian J. Anim. Sci., 21, 671 – 676.
3. Geraert, P.A., Padilha, J.C.F. and Guillaumin, S., 1996. Metabolic and endocrine changes induced by chronic heat exposure in broiler chickens: growth performance, body composition and energy retention. Brit. J. Nutr., 75, 195-204.
4. Gross, W.B., 1992. Effect of short-term exposure of chickens to corticosterone on resistance to challenge exposure with Escherichia coli and antibody response to sheep erythrocytes. Am. J. Vet. Res., 53, 291-293.
5. Ogle, C.K., Valente, J.F., Guo, X., Li, B.G., Ogle, J.D. and Alexander, J.W., 1997. Thermal injury induces the development of inflammatory macrophages from nonadherent bone marrow cells. Inflammation 21, 569-582.

Acknowledgement

This project was supported by NSTIP strategic technologies program number (12-AGR2540-02) in the Kingdom of Saudi Arabia.

THE USE OF RELATIONAL DATABASE IN INTENSIVE CAMEL DAIRY FARM

Al-Samghan T.[1], Faye B.[1,2], Konuspayeva G.[1,3]

1. FAO Camel project UTF/SAU/044/SAU, Al-Kharj, Saudi Arabia, E-mail: turkiassiri2014@gmail.com; 2. CIRAD, UMR SELMET, Montpellier, France; 3. Al-Farabi University, Almaty, Kazakhstan

Abstract

In Saudi Arabia, the camel is representing the old generations while technology is presenting the new generation. However, two generations are mixed together to keep old culture in modern form. For these, we started to build information system to save and process data collected in camels. This database using Access tool is the start point for establishing a convenient control of performances of our animals. Our database is including five main items regarding identification (camel characteristics), reproduction (mating and calving events), milk production (individual produced quantity including milk flow), milk composition (12 parameters), milk processing (pasteurization, cheese making) and diseases. This relational database allows assuming a regular monitoring of all performances, a primary step for implementing a selection program and contributing to the genetic improvement of the species. The present paper is describing the Conceptual Model of the Data and shows some potentialities for data treatment.

Keywords: camel farming, database management, performances monitoring

ДЕРЕКТЕРДІҢ АВТОМАТТАНДЫРЫЛҒАН МӘЛІМЕТТЕР БАЗАСЫН ҚАРҚЫНДЫ ТҮЙЕ-СҮТ ФЕРМАЛАРЫНДА ПАЙДАЛАНУ

Сауд Арабиясында түйе малының өсуі ескі кезең болып есептелсе, заманауи технология жаңарып келеді. Алайда, екі кезең бірге араласып жұмыс істесе, ескі мәдениеттер қазіргі түрде сақталады. Сондықтан біз түйелерден жинаған мәліметтерді ақпараттық жүйеге тіркеп, деректерді өңдеуді бастадық.
Осы деректер базасы, қол жетімді құралды пайдалана отырып жануарларды есептеуге, басқаруға қолайлы басқарушы өнімділікті жасау үшін бастапқы нүкте болып саналады. Біздің деректер базасы негізгі 6 пункттен тұрады: бірыңғайландыру (түйе сипаттамалары), жаңғырту (жұптау және төлдерді дүниеге әкелу), сүтті өндіру (сүтті және сүт ағысын дербес есептік өндіру), сүттің құрамы (12 параметр), сүтті қайта өңдеу (пастерлеу, ірімшік өндірісі) және аурулар.
Деректердің автоматтандырылған мәліметтер базасы түйе шаруашылығының мониторингін жүргізуге, осы болжаулардың, сұрыптаудың бағдарламасын жүргізу үшін барлық өнімділікті үздіксіз бақылауға, генофондты жақсартуға өз үлесін тигізеді. Осы құжат тұжырымдамалық суреттеледі және деректерді өңдеу үшін кейбір мүмкіндіктерді көрсетеді.

Түйін сөздер: түйе шаруашылығы, деректердің негіздері, басқару, өнімділіктің бақылауы

ИСПОЛЬЗОВАНИЕ АВТОМАТИЗИРОВАННОЙ БАЗЫ ДАННЫХ В ИНТЕНСИВНЫХ ВЕРБЛЮДО-МОЛОЧНЫХ ФЕРМАХ.

Верблюды в Саудовской Аравии отражают старое поколение, в то время как технологии представляют новое поколение. Тем не менее, два поколения идя параллельно, сохраняют старую культуру в современном виде. Поэтому мы начали строить информационную систему для сохранения и обработки данных, собранных у верблюдов. Эта база данных, используя современные средства доступа, является начальной точкой для создания удобной формы управления животными. Наша база данных состоит из 6 основных пунктов, касающихся идентификации (верблюжьих характеристик), воспроизводства (спаривания и рождения детенышей), производство молока (индивидуальноге количественное воспроизведение молока в том числе молочного потока), состав молока (12 параметров), переработка молока (пастеризация, производство сыра) и болезни. Созданная автоматизированная база данных позволяет осуществлять регулярный мониторинг всего верблюдоводства, осуществлять отбор, подбор и улучшить генофонд верблюдов. Настоящая статья описывает концептуальную модель и показывает некоторые возможности для обработки данных.

Ключевые слова: верблюдоводство, управление базами данных, мониторинг производительности

Introduction

The proper management of livestock in big intensive dairy farms has to be based on a convenient monitoring of the performances and of the inventory. The exhaustive data recorded on these animals could help the decision-makers of the farm in all aspects of the management (culling policy, valorization of the products, health management). Globally, those data belong to two types of information regarding the animals (characteristics, reproduction, production, and health) and their products (Milk and milk products especially). In the dairy camel farm of the research project managed by FAO at Kharj in Saudi Arabia (project UTF/SAU/044/SAU), the objective of the farm is obviously production, but also research which further accentuates the needs of an information system to have convenient references (Lescourret et al., 1993). The nucleus of such system is one relational database. The example of the database of our project is described in the present communication.

Materials and methods

The database was created under Access ®, Microsoft. The FAO camel farm database includes five main entries (figure 1): (i) Camel identification, (ii) camel reproduction, (iii) camel milk production and composition, including microbiology control (iv) camel cheese making, and (v) camel diseases. Each entry allows access to a set of related tables each other. All the animals belonging to unique farm, the unit is the camel identified by a number (four-digit). Only the entries cheese and bulk milk give access to tables where the unit is mixed milk.

Figure 1. Entry screen of the database with the five data entries (camel identification, camel milking, camel cheese, camel diseases and camel reproduction) and entry “close”

Figure 2. Camel identification form

The data are collected daily (milk production and composition, microbiological control), regularly at different rhythm (weight every month, individual milk flow every week) or randomly (reproduction events, diseases). During the data entry process, coherence controls could be expected for avoiding common mistakes in the number (for example the biological ranges for milk composition or for weight. The data are entered regularly, either manually, directly in the Access form or by importing an Excel ® file subject of identical structure of the column headings. For statistical analyses, the data can be exported to Excel table.

Results and discussions

Each entry gives access to a set of data-tables related each other (table 3) and roughly described as follows:

1. Identification entry: one table where each animal is characterized by his history: number, number of mother and father, birth date, birth weight, weaning date, out date, outcause (mortality, culling, sale), breed and sex (Figure 2). In addition, the form includes a table for register the monthly weight for the young growing animal
2. Camel milking entry: the entry is linked to 2 other entries: composition (including 5 tables for “individual milk”, “morning and afternoon bulk milk”, “mixed milk for cheese making”, ‘pasteurized milk” and ‘whey”), and production giving access to 2 tables, “individual production” (weekly data) and “mixed production” (daily data). The tables composition included 11 physico-chemical parameters (fat, protein, lactose, density, total non-fat, total solids, citric acid, free fatty acid, freezing point, pH, titrable acidity) and 2 microbiological parameters (coliform and total flora)

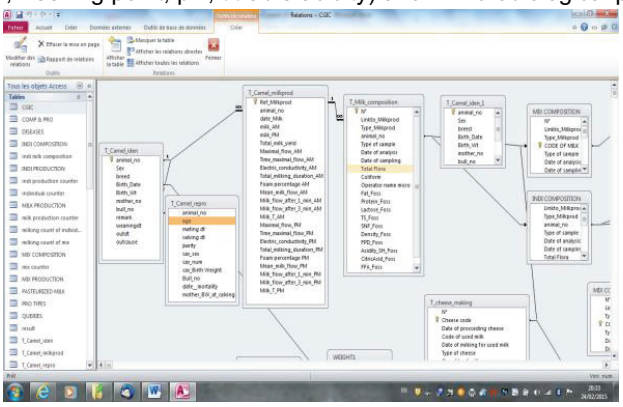

Figure 3. Partial conceptuel data model (tables and relations)

Cheese making entry (one table linked to milk composition) describing the different steps
Camel reproduction (one table linked to table identification and individual milk production and composition) which includes successive data regarding date of mating and calving, sex and weight of new calf, the parity of the mother at calving and number of the bull
Camel diseases including one table (linked to table identification) with a list of symptoms gathered by groups (respiratory symptoms, digestive symptoms, locomotion disorders, reproduction disorders etc…), the date of symptoms and obviously the number of the camel.

References

1. Lescourret F., Genest M., Barnouin J., Chassagne M., Faye B., 1993. Data modelling for database design in production and health monitoring systems for dairy herds. J. Dairy Sci., 76, 1053-1062.

EVALUATION OF GROWTH PERFORMANCE, SERUM PROFILE AND HAIR MINERAL STATUS OF WEANED MARECHA CALVES (CAMELUS DROMEDARIUS) FED TWO DIFFERENT PROTEIN LEVELS UNDER INTENSIVE MANAGEMENT SYSTEM

Asim F.[1], Younas M.[1], Lateef M.[1], Sarwar M.[2], Ghulam M.[3] Yaqoob M.[4], Kashif I.[1]

[1]Dept. of Livestock Management, University of Agriculture, Faisalabad, Pakistan. drasimuaf@yahoo.com; [2]Institute of Animal Nutrition and Feed Technology, University of Agriculture, Faisalabad, Pakistan; [3]Dept. of Clinical Medicine and Surgery, University of Agriculture, Faisalabad, Pakistan; [4]Dept. of Livestock Production and Management, PMAS, Arid Agriculture University, Rawalpindi, Pakistan

Marecha camel has good potential for commercial camel farming and it could be the potential source for future food production especially in arid and semi-arid areas. Research work on production potential of Marecha camel is scanty. In present study 10 male Marecha calves (Camelus dromedarius) around 300+30 days of age were weaned at 9 months age and used in 90 days trial to study their growth rate and were raised in two groups with 5 calves each under stall-fed conditions (intensive management system, IMS). They were offered roughage+concentrate at the ratio of 60:40. In 60 proportions the ratio between fodder (lucerne) and crop residues (gram crop residues) was 70:30. They were fed concentrate with two levels viz: one group with 18% and other group with 22%. Daily feeding allowance was calculated and adjusted according to fortnightly weighings. Twice watering was done. Daily weight gain was 0.953+0.05 and 0.996+0.04 kg/d with 18% and 22% levels of protein ration, respectively while average DMI of concentrate, fodder and crop residues was 2.93+0.15, 3.00+0.16 and 1.31+0.08; 2.94+0.07, 3.03+0.07 and 1.31+0.03 kg/d, respectively with 18% and 22% levels of protein rations. These findings did not differ significantly (P>0.05). Hemoglobin concentration found to be 16.36+0.14 and 16.82+0.09 (g/dL) with 18% and 22% levels of protein ration differed significantly. Cu and Mn concentrations in wool also differ significantly between two groups and were found to be 7.41+0.23, 8.12+0.19 and